“Effects of Combined Training Programs on Selected Health Related Physical, Physiological and Psychological Variables of Secondary School Students”

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INTRODUCTION

Aerobic exercise is physical exercise of relatively low intensity thatdepends primarily on the aerobic energy-generating process. Aerobic literallymeans "living in air", and refers to the use of oxygen to adequately meet energydemands during exercise via aerobic metabolism. Generally, light-to-moderateintensity activities that are sufficiently supported by aerobic metabolism can beperformed for extended periods of time. Aerobic exercise provides cardiovascular conditioning. The term aerobic actually means "with oxygen," which means that breathing controls the amount of oxygen that can make it to the muscles to help them burn fuel and move.

Aerobic literally means oxygen referring to the consumption of oxygen bythe metabolic system. It involves a little warm up activity at the start and anotherminimum 20 minutes of exercise. Aerobic exercises are vital in weight lossactivities.Aerobic exercise is the cardiovascular activity that involves prolongedactivity of large muscles without stopping. Aerobic exercises burnsone's fat andkeeps one's metabolism rate high even after the activity is over. Just after 15minutes of the exercise one's glycogen burn's off producing glucose, which thenuses oxygen to generate energy by burning fat.

Though very latter researches have been conducted to establish itseffectiveness, there is a growing belief that certain type of music tend to stimulate aperson to a higher performance level. This seems to be consistent with theobservation that rock music and marching music tend to elicit movement on thepart of any listeners.

Singher(1972) stated that the exercise records seem to be widely used in schools as a means of stimulating students to keep up with the pace and perhaps perform a maximum of activity with a minimum of conscious pairs.

The rhythm of the music should guide the performer in his movement while his arousal level should be brought to an optimum level for learning skills. If this optimum situation is created, it is reasonable to expect that the student will learn faster and easier new skills than in a situation without music, which are according to the discussed research outcomes, cannot be considered an optimal situation. Here music helps the students to recognize rhythmic patterns in sports activities for improving fundamental skills such as walking, jumping and running.

Weinberg and Gould (1995) stated that the aerobic exercise is a physical activity that increases the activity of pulmonary and cardio-vascular systems. During aerobic exercise, the body uses and transports oxygen to the working muscles to maintain the activity.

Aerobic exercise includes such activities as brisk walking, running, swimming, step aerobics, cycling, and aerobic dance, cross country, skiing and rowing.

Bucher (1985) stated that Aerobic exercises are any physical activity that requires your heart rate to reach at least sixty percent of your maximal heart rate for an extended period of time. Anaerobic dance program contributes to physical fitness by providing aerobic exercise and improving cardio respiratory endurances, strength, flexibility and muscular endurance.

Jackson (1987) stated that aerobic exercises depends upon the continuousaction of a number of groups of muscles over a period of time, they get fitter than you are able to get from longer periods out of your muscles. The process of increasing aerobic fitness involves increasing the rate at which blood can be carried from the lungs to the exercising muscles. This obviously depends partly upon the heart itself, but it also depends upon increasing the blood supply to the muscle tissue and increasing their ability to extract oxygen from the blood. Aerobic exercise is also the kind that aids weight loss.

Mildred and Cooper (1972) have proposed for woman a point system for activities to develop circulatory and respiratory fitness, called aerobics. The general plan is for the individual to accumulate thirty points a week from selection of activities; each activity has a point value commensurate with its contribution to aerobic fitness. The aerobic point system was derived from laboratory measurements of oxygen, costs of the exercise as well as data derived from field tests.

Christina Berth (1982) stated that word aerobic simply means with Oxygen and can therefore be used to describe many form of exercises or sports such as jiggering swimming dancing. The purpose of all these form exercise is to make the muscles including the heart which is the muscle work harder than normal.

These increases their need for oxygen and body responds both by breathing more deeply, raising the oxygen intake bye the lungs and by speeding up the heart rate so that more oxygen reach blood is pumped round the body to supply the muscles. The muscles therefore become

stronger and more efficient will reach the cardio vascular systems, heart, lungs and circulatory system toned up improving efficiency.

Donald (1991) opined that because aerobic activates have been linked with coronary heart diseases prevention and to caloric expenditure they have received a great deal of attention in boat Reached and practice.

Aerobic as it means with oxygen it refers that body is using oxygen for metabolic or energy generating process. Aerobic exercise refers to exercise that involves or improve oxygen consumption by the body. Floor aerobics are a kind of aerobics that are generally performed using no equipment and in a plain floor surface. The steps that can be choreographed in an aerobic routine can be of varied impact (i.e, high impact versus low impact). Floor aerobic or aerobic dance exercise usually completed easily by participants of all ages and fitness level. This is one of the unique characteristics of aerobic dance exercise. The same step can be modified by the participants to meet the needs of individual workout. A typical aerobic dance exercise workout fulfills the cardio respiratory training principles (namely frequency, intensity, duration, and type of activity continuous) and is similar to any cardio respiratory workout classes begins with a warm up of light activity and stretching exercise for 10 minutes, progress to the 20-30 minutes workout phase and then have a gradual cool down period for 10 minutes. Three parts of a typical 60 minutes program. A number of steps have been defined as walk, run, skip, two-steps, on sport march, jog, jumping etc.

Aerobic dance consists of mixture of running, hopping, skipping, jumping, sliding, and swimming moments and a variety of dance steps self to music. During performance of these dance routines there is suspension phase of the body during which both feet one momentarily of the floor. This type of a modification of traditional aerobic dance has evolved called “high impact” aerobic dance. Recently, a modification of traditional aerobic dance has evolved called “low impact” aerobic dance. In this approach, one foot maintained contact with the floor at all times. There by eliminating the suspension phase of the activity thus the incidence of impact type of influence should be lessened with low impact dance. (Donatelle, 2005)

Benefits of Aerobic Exercises

- The heart operates more efficiently/ and becomes stronger.
- It helps to control weight.
- Decreases the risk in developing diabetes, heart diseases and obesity.

- There is an augment in good cholesterol and reduction in bad cholesterol.
- It augments endorphins.
- Augments the body's efficiency to take in oxygen and makes breathing faster.
- It helps to reduce and regulate the body fat.
- Increases the body muscle strength and elasticity.
- Increases the quality of sleep that refreshes one early next morning.
- Helps to decrease chronic diseases like heart disease and hypertension.
- Aerobics intensify the resistance fatigue and gives more vigor and energy.
- Recovers mood and decreases the depression, stress and anxiety.
- It avoids overheating.
- Aerobics pushes the blood faster and more energetically.
- Helps in prevention of cardiovascular diseases.
- Sculptures muscles of the body and makes body more flexible.

Yoga and Aerobic Exercises

Yogic postures tone up the body and the mind whereas physical exercise affects mainly the body. The caloric requirement in yogic asanas varies from 0.8 to 3calories per minute while the caloric requirement of a physical exercise varies from 3 to 20 calories per minute. The main purpose of physical exercise is to increase the circulation of the blood and the intake of oxygen. This can be done by yoga's simple movements of the spine and various joints of the body with deep breathing, but without violent movements and asanas, the various blood vessels are pulled and stretched and blood is equally distributed to every part of the body. The stretched and blood is equally distributed to every part of the body. The stretched muscles and ligaments during yoga practices are immediately relaxed muscles. Fatigue appears after doing physical exercises. Fatigue disappears if yoga and pranayama is practiced. Tension increases andnerves are more tightened through physical exercise. Nerves and body musclesare relaxed by yoga.

Yogic exercise aims at both prevention and treatment of variousdiseases. Breathing exercise aims at both prevention and treatment of variousdiseases. Breathing exercises like pranayama including Kapalabhati is veryeffective for keeping the lungs healthy and prevent lung infections. Withdeep breathing air circulates to every part of the lungs whereas with most

otherphysical exercises, there is mainly an increase in the respiratory rate. However,physical exercise wastes more energy due to quick movements and more lacticacids are formed in the muscle fibres. But energy is not wasted in yogapractices. Yoga postures and breathing exercises unlike physical exercises donot strain the cardio vascular system, and they improve one's physical fitnessand endurance.

Yoga

"The term yoga originates from a Sanskrit word which means burden or association. Customarily, yoga is a technique uniting the individual self with the Divine, Universal Spirit, or Cosmic Consciousness. Physical and mental exercises are intended to help accomplish this objective, likewise called self-amazing quality or illumination. On the physical dimension, yoga stances, called asanas, are intended to tone, strengthen, and adjust the body. These stances are performed to make the spine supple and healthy and to elevate blood stream to every one of the organs, organs, and tissues, keeping all the real frameworks healthy. On the mental dimension, yoga uses breathing systems (pranayama) and reflection (dyana) to calm, clear up, and discipline the mind. Be that as it may, specialists rush to call attention to that yoga isn't a religion, however a method for living with health and tranquility of mindasitsaims." ("Yoga", n.d.)

Yoga is a route for health; it is a psycho-social movement. It has both psychological and social measurement other than physical, physiological and specialized angles. Human intrigue is yoga is found in all general public of world. The greater part of the humanity shares a typical enthusiasm for yoga for their health and fitness improvement.

Yoga is a lifestyle, a coordinated arrangement of education for the body, psyche and internal soul. The craft of precise living was culminated & rehearsed in India a great many years earlier that as it may; since yoga manages well known fact its lessons are as legitimate these days as they have been in antiquated occasions. Yoga is a pragmatic guide, not a religion and its systems might be rehearsed through many religions like Muslims, Hindus, Christians, Buddhist, Jains& Nonbeliever alike. Yoga is affiliation for all.

Importance of Yoga

Human body and mind are, possibly, the greatest wonders in the whole universe, except the partially understood universe itself. With functions and faculties as varied as imagination,

intuition, logical reasoning, empathy, and sense of colour, beauty and rhythm, human mind is unique in this universe.

Human body too exhibits peculiarities unparalleled in the animal kingdom. No other animal can make movements as varied as man. For example, he can balance himself on two feet and perform amazing things, almost defying the exigencies of the laws equilibrium. He can swim, dive, climb trees, perform a somersault, stand on the head, and so on. Man's complex brain controls all such movements, which, in turn, is stimulated by such movements.

In short, when the movements of your body parts, muscles, and joints are wide and varied, your brain works meticulously and in turn, gets stimulated. When the movements are restricted and limited, your brain does not receive the required stimulation and consequently, your mental functions, especially those relating to spiritual experiences, tend to diminish.

Primitive men and women were adept tree-climbers, because, like most other primates, man originally lived in trees. Later, he started to build huts and lived in them but did not forget the skill to climb trees. To collect honey or to pick fruits and nuts he continued to climb trees.

Later, man became a farmer abandoning his life as hunter gatherer. This obviated the need for long journeys on foot and the necessity to climb trees. When the movements of his limbs and muscles became limited and restricted, his brain ceased to get sufficient stimulation he used to get in the past and, consequently, his mental life especially the spiritual leanings and experiences became limited.

Tree climbing and clambering over steep rocks call for coordinated functioning of a number of muscles, which no other activity requires. The feet are turned upward, abdominal muscles are put into action and the thoracic and limb muscles are simultaneously put to use. Settled life in farms took away at least sixty percent of all muscular movements the ancient man used make. In urbanized people, muscular movements are still limited. Ask a town dweller to cross a stream treading on a log laid across it. A simple day- to-day activity for even a child in the countryside, the task is a formidable and often impossible one for an urbanized man.

In India, wise men in the early period of settled life saw the spiritual degradation among people and intelligently connected it to the reduced muscular activity. For those who would opt for higher consciousness and greater spiritual experience, they devised exercises which would simulate the lost movements in the ancient era. They taught their followers the scientific way of

regaining the spiritual heights and intuitive wisdom of the ancient man without actually undoing the whole of human civilization.

Benefits of Yoga

- Somatic and kinaesthetic awareness increase
- Mood improves and subjective well-being increases
- Self-acceptance and self-actualization increase
- Social adjustment increases
- Anxiety and Depression decrease
- Concentration improves
- Memory improves
- Attention improves
- Learning efficiency improves
- Mood improves
- Self-actualization increase
- Social skills increases
- Well-being increases
- Self-acceptance increase
- Attention improves
- Concentration improves

Statement of the Problem

The purpose of the study was to find out the **"Effects of Combined Training Programs on SelectedHealth Related Physical, Physiological and Psychological Variables of Secondary School Students"**

Objectives of the study

- To study the Impact of Combined training on Health Related Physical Fitness Variables of the Subjects.
- To study the Impact of Aerobic Exercise on Health Related Physical FitnessVariables of the Subjects.

- To study the Impact of Yogic Practices on Health Related Physical Fitness Variables of the Subjects.
- To study the Impact of Combined training on Physiological Variables of the Subjects.
- To study the Impact of Aerobic Exercise on Physiological Variables of the Subjects.
- To study the Impact of Yogic Practices on Physiological Variables of the Subjects.
- To study the Impact of Combined training on Physiological Variables of the Subjects.
- To study the Impact of Aerobic Exercise on Psychological Variables of the Subjects.
- To study the Impact of Yogic Practices on Psychological Variables of the Subjects.

Delimitations of the study

- For the purpose of the study, 120 Students in the age group ranging from 14-16 years will be randomly selected as subjects.
- The Study Delimitated to Minority Morarji Desai Girls Residential School Arakeri District, Vijayapura, of Karnataka.

  The subjects will be randomly assigned into Three groups of thirty each (N=30). Group I known as Experimental Group will undergo combined training,Group II known as Experimental Group will undergoAerobic Exercise, Group III known as Experimental Group will undergoYogic Practices and Group IV Control Group will not undergo any special training program me.
- The duration of the experimental period will be restricted to 12 weeks. The number of sessions per week for the Experimental groups will be confined to sixteen.
- The followingHealth Related Physical Fitness Variables like Muscular Strength & Endurance, Cardio-Respiratory Endurance and Flexibilitywill be selected for the study.
- The following Physiological Variables like Vital capacity; Blood Pressure and Resting pulse rate will be selected for the study.
- The following Psychological Variables like Anxiety, Stress and self-concept will be selected for the study.

Limitations of the study

- The daily routine work of the subjects might influence results this is considered as limitation.
- The climatic conditions at the time of conducting the test might influence the performance of the GirlsStudents is considered as limitation.

- The general mode, environmental factors and performance in the test by the subject will also recognized as limitation of the study due to varied social, cultural and environmental factors will not taken into consideration.
- No motivational technique will be used for the collection of data.

Hypothesis

- It is hypothesized that the implementation of combined training improves the Health Related Physical Fitness Variables of the Girls Subjects.
- It is hypothesized that the implementation of Aerobic Exercise Training improves the Health Related Physical Fitness Variables of the Girls Subjects.
- It is hypothesized that the implementation of Yogic Practices improves the Health Related Physical Fitness Variables of the Girls Subjects.
- It is hypothesized that the implementation of combined training improves the Physiological Variables of the Girls Subjects.
- It is hypothesized that the implementation of Aerobic Exercise improves the Physiological Variables of the Girls Subjects.
- It is hypothesized that the implementation of Yogic Practices improves the Physiological Variables of the Girls Subjects.
- It is hypothesized that the implementation of combined training improves the Psychological Variables of the Girls Subjects.
- It is hypothesized that the implementation of Aerobic Exercise improves the Psychological Variables of the Girls Subjects.
- It is hypothesized that the implementation of Yogic Practices improves the Psychological Variables of the Girls Subjects.

Significance of the study

- The Result of this study will help physical Education teachers, coaches and trainer to know the use ofAerobic ExerciseAerobic Exercise, and Yogic Practices to improve the Health Related Physical Fitness,Physiologicaland Physiological Variables of theGirls Subjects.
- The Result of this study will help us to assess theMuscular Strength & Endurance, Cardio-Respiratory Endurance and Flexibilitywill be selected for the study.

- The Result of this study will help us to assess the Vital capacity; Blood Pressure and Resting pulse of the Girls Subjects.
- The Result of this study will help us to assess the Anxiety, Stress and self-concept of the Girls Subjects.
- This study will throw light on the level of Health Related Physical Fitness, Physiological and Psychological Variables of the Girls Subjects.

Definition of the terms

Aerobic Exercise

The American College of Sports Medicine (ACSM) defines aerobic exercise as "any activity that uses large muscle groups, can be maintained continuously, and is rhythmic in nature." It is a type of exercise that overloads the heart and lungs and causes them to work harder than at rest. The important idea behind aerobic exercise today, is to get up and get moving. There are more activities than ever to choose from, whether it is a new activity or an old one. Something doing that keeps heart rate elevated for a continuous time period and gets moving to a healthier life. **(Ajmer Singh, 2003)**

Yoga

"Yoga is a way of life which can be practiced by any human being regardless of age and condition of health. Yoga is a gaining process of control over the mind. There by improving the psychological behavior of an individual."

Asana

"It means retaining the physique in a specific posture to bring steadiness to the body and poise to the mind. The practices of asana convey purity in tabular channels firmness to the body and vitality to the body and the mind."

Yogic Exercises

"Yogic exercises are a system or a method of doing or achieving something is based on logic and rational consideration, it qualifies to be scientific."

Health Related physical Fitness

"It is the physical fitness parameters connected with health such as cardio respiratory endurance, flexibility, body composition, muscular strength & endurance" (**Morrow, 2005).**

Muscular Strength & Endurance

"Muscular Strength & Endurance is the potential of a muscle group to develop maximal contractile pressure towards a resistance in a single contraction" **(Heyward, 2002).**

Cardio-Respiratory Endurance

"It is the ability to perform dynamic exercise involving large muscle groups at moderate to high intensity for prolonged periods." **(Heyward, 2002)**

Flexibility

"It is most frequently given as the range of movement about a joint". **(Mathews, 1958)**

Physiology

Physiology is the science of functioning of all the organs and systems of an organism. For the physiological system of the body to be fit, they must function well enough to support to specific activity that the individual is performing more over different activity make different demands upon the organism with respect to circulatory, respiratory, metabolic and neurologic process which are specific to the activity **(Ajmer Singh, 2005).**

Vital Capacity

Vital capacity is operationally defined as the maximum amount of air that can be inspired and expired in one maximal inspiration and expiration and measured in liters/min **(sarada, et al., 2004).**

Blood Pressure

Blood pressure is known that blood flow through the vessels of the circulatory system as a result of pressure gradient. This means that blood flows from a point of high pressure to one of the low pressure **(Shaver, 1981).**

Resting Pulses Rate

The researcher refers to “the rate of heart beats per minute, assessed when a body is at rest”. **(SandhyaTiwari, 1999)**

Psychology

Sports psychology is defined as the scientific study of human behavior in sport. Like the other discipline with in sports and exercise science, sports psychology can be applied to varied skilled movement physical activities and exercise programmes, such as corporate fitness, exercise rehabilitation and health oriented exercise programmes as well as traditional physical education and competitive athletics. (**Diane L. Cell, 1972)**

Anxiety

Anxiety is a personality trait that relates to the degree, to which an individual is apprehensive, fearful, nervous, tense, and jittery Costa and McCrae (1992).

Stress

Stress is the emotional and physical strain caused by our response to pressure from the outside world. Common stress reactions include tension, irritability to concentrate and a variety of physical symptoms that include headache and a fast heart beat. **Diane L.Cell (1972).**

Self-concept

‘The individual's belief about himself or herself, including the person's attributes and who and what the self-is**(Baumeister 1999).**

Secondary school students

The government secondary school students studying in VIII and IX standard under Karnataka Syllabus are considered in this research

REVIEW OF RELATED LITERATURE

Uthirapathy and Chandrasekaran (2010) conducted a study to find out the comparative effectiveness of yoga and aerobic exercises on basal level of cortisol. To assess the stress level the subjective inventory questionnaire was administered to four hundred and twenty players from Thiru. Vi. Ka Govt. Arts College, Thiruvarur Tamil nadu, India. Based on their score, fifty six players with perceived stress were identified. Of the fifty six, forty five subjects were randomly selected for this study. The subjects were divided equally into three groups namely control group, yoga group and aerobic exercises group. The yoga group and aerobic exercise group underwent yogic practices and aerobic exercise, respectively. The experimental period was twelve weeks, six days a week and forty mintes per day. The control group was not given any sort of special training, The criterion measure selected, for the study, was cortisol level and it was tested before and after the period of experiment. The initial and final scores, of all three groups, were obtained. To find out the significant mean differences, the analysis of co-variance was employed. Further, the scheffe's post – hoc test was used to identify which group had shown better. The training effect of yogic practices and aerobic exercises evidences significance over the basal cortisol level.

Divya and Shenbagavalli (2010) investigated to find out the effect of Gymnastics exercises and Yoga on selected physical performance, physiological and bio-chemical variables among college students. Ninety college women students were selected as subjects for this study and were divided into three groups namely control, yoga and gymnastics exercise groups. The age group of the subject was 18 to 21 years. To assess the effect of 12 weeks training for gymnastics and yogic programme and the following dependent variables were chosen in vital capacity, heart rate, breath holding time, systolic blood pressure, diastolic blood pressure, blood sugar and cholesterol, endurance, speed and abdominal strength. The obtained data were statistically analysed through ANCOVA to test the significant difference and the result showed that the Gymnastic exercise and yogic training brought significant improvement among the college women on all variables expect in diastolic blood pressure.

Rathod and Kuravatti (2018) contemplated "the effect of asanas on physical fitness of government residential school pupils. The age furthest reaches of players was 14 to 17 years of 60 girls are picked among 30 control group and 30 from experimental group from the Vijayapur

region, Karnataka. Asanas and Muscular Endurance and Flexibility were utilized to gauge the Physical fitness factors. To evaluate the noteworthiness of contrasts between the methods if there should be an occurrence of notable t-values test was connected. It was presumed that six weeks of yogasanas preparing had indicated improvement in muscular endurance and flexibility of the subjects."

Shiraishi et al (2017) assessed "the effects of a 12-week systematized yoga intercession on health-related physical fitness parts surveyed by body mass index, body mass (BM), midsection outline, relative body fat, abdominal endurance, chest area endurance, hamstring flexibility, and cardio respiratory fitness. The investigation was performed at University of Brasília, Personnel of Physical Education, Distrito Government, Brazil. Twenty-five youthful healthy yoga fledglings (22.36 ± 2.40 years), both sex, volunteered to take an interest in this investigation. The intercession depended on 50 minutes yoga class, two times every week for 12 weeks, including physical postures, meditation, and unwinding. Estimations were performed multi week prior to and multi week after the yoga mediation. Gathering the data included age, sex, height, body mass, body fat appraisals and physical fitness tests. Body fat rate was dictated by the proportion of skinfolds at seven sites. Muscle strength/endurance was assessed by push-up and sit-up tests. Hamstring flexibility was surveyed utilizing sitand-reach test convention. The 12-minutes Cooper test was performed to appraise cardiorespiratory fitness. Members that went to in any event 75% of the all out sessions were incorporated into the examination results. The outcomes indicated 1.3 (1.0 - 4.0) cm decline in WC and 0.7 (0.9 - 1.5) decline in body fat rate, and 7.8 (2.0 - 5.0) cm increment in hamstring flexibility and 3.0 (1.0 - 4.0) in abdominal endurance, after the yoga mediation. All in all, the present investigation found that a 12-week yoga program improved physical fitness in youthful healthy subjects."

Bedekar and Hande (2017) examined "the effect of yoga on health related physical fitness. The chose factors are Cardio Respiratory endurance, Body Composition, Flexibility and Muscular strength of thirty females between the age group 18-25 years of Pravara Organization of Therapeutic Science, Loni. The progressions in Cardio respiratory endurance, Body composition (Body Mass Index), Flexibility and Muscular strength were assessed when four weeks of yoga. The data got was broke down utilizing matched 't' test. $p<0.0001$was the degree of centrality. The aftereffects of the examination demonstrated that there was a noteworthy improvement in the Cardio respiratory endurance, Body Mass Index, Flexibility and Muscular strength after experiencing four weeks of yoga when contrasted with that before yoga."

Adling (2016) assessed "the effect of asanas on chose health related physical fitness segments of the young people. The subjects for this investigation were thirty male pupils randomly chosen from Dada PatilRajle arts and science college Adinath Nagar. The subjects' age went between sixteen to eighteen years. The subjects had been equally isolated into two groups specifically one experimental and one control group. The medications to the experimental groups were doled out randomly; one for Asanas and another group filled in as control group. The treatment calendar was prepared for twelve weeks. The experimental medicines were utilized for 45 minutes per day in five days seven days for twelve weeks span. Pre and post-test data of the considerable number of subjects from two groups were gathered when the experimental treatment time of 12 weeks. The chose factors were Cardio-respiratory Endurance, Flexibility, Muscular Strength and Endurance. The data was evaluated by utilizing analysis of covariance at the 0.05 degree of criticalness. The outcome uncovered that routine with regards to asanas had huge effect on Cardio-respiratory Endurance, Flexibility, Muscular Strength and Endurance of the subjects."'

Vinu (2015) explored "the effect of yogic practices on health related cardio respiratory endurance of the young people. To accomplish the motivation behind this investigation, a certified doctor analyzed 30 pupils were chosen at random, their age kept running from eighteen to twenty-four years. The elected subjects have been disengaged into experimental and control groups with fifteen subjects in each. The group one practices yogic practices (YPG) and Group two as 'CG' group for the planning time of twelve weeks. All of the subjects have been prompt about the possibility of the examination and their concur was gotten to cooperate till the piece of the direction of motion and checking out period. The records gathered from the three corporations when the experimental length was once factually analyzed to discover the necessary enchantment utilizing the examination of covariance. It was meddled from the discoveries that cardio-respiratory endurance has altogether improved for yogic practice group."

Khodaskar (2015), determined the effect of yogic practices on health related physical fitness, psychological and physiological parameters of police staff. The thought of the examination used to be HRPF fashionable Psychological (occupational related pressure) and Physiological Parameters evaluated of the Police Staff. Yogic Preparing software for this assessment and improve the impact of yogic Preparing program. This investigation consists of eighty male and eighty girl of Amravati city Police Faculty and extent of thirty six to forty six year, Male (N- 40 and N -40) and lady (N - 40 and N - 40). Each exploratory gathering used to

be given sixteen weeks getting ready for yogic Practices. From that factor forward, previous check used to be once greater coordinated to look out the Post-test results. The Male and lady Police Work energy gathering has demonstrated integral improvement in HRPF aspect (Cardio-vascular Endurance, Flexibility, Muscular Strength and Body Fat Rate)

Awasare (2013), concentrated to know the effect of chosen yogic asanas on the Health Related Physical Fitness of college boys. The examination was following angles just 40 male were chosen for the investigation. In these examination just college boys has taken. Age of the college boys was shifting between 18 to 25 years. The wellspring of the data was college boys was Nagpur Region. The 40 subject partitioned into two groups, twenty in 'A' group as experimental group and 20 in group 'B' as control group. The subject was chosen by utilizing straightforward random examining. It was reasoned that the effect of yogic Asana on health related physical fitness of college boys were huge contrast seen in pre and post tests of control group in health related physical fitness factors. Critical contrast saw in pre and post tests of experimental group in health related physical fitness factors aside from body mass index. Huge distinction saw in post test and control and experimental group in health related physical fitness factors with the exception of body mass index.

Shaikh and Bari (2013), composed an evaluation on effect of yoga practices for development of physical health amongst faculty younger girls of Aurangabad in India. The example for the current assessment incorporates 40 college young women out of which 20 are experimental team and 20 are CG. Yoga things to do were given to exploratory group on exchange days for occasion three periods for reliably and managed group had been given the time-honored getting prepared of physical activities for two months. To assume about physical wellbeing the 50 Meters Run, Shuttle Run and 600 Yard Run used to be composed in Prior and After Test on the two groups. The consequences of the contrast were, the big difference among pre and submit take a look at in exploratory crew and manipulate crew used to be enormously vital.

Thuse (2011) assessed "the effect of yoga on health related to physical fitness program on the female of Amravati town. This investigation was expected to see the effect of Yoga rehearses on the 50 female of mean age 38.3 of years. The physical factors on which the effect of Yoga practices watched were flexibility of abdominal muscles, abdominal muscle endurance, cardiovascular endurance, waistline and body mass index (BMI). Program of Yoga health related was given to these members for 14 weeks. 5 days a week and one hour day by day from 7 a.m. to

8 a.m. pre-preparing and post preparing tests were directed. The outcomes were estimated by t-test of SPSS it demonstrated the huge contrasts among when being prepared by this program by concentrating the effect of Yoga on Flexibility; Abdominal muscles; abdominal muscle endurance; cardiovascular endurance; Midsection line and Body mass index."

Praveenakumar, Bujurke and Rathod (2011) found the effect of Yogic pranayama and meditation on physical factors of explosive strength, flexibility and endurance of secondary level pupils. Thirty school boys were chosen and their age between 18 to 25 years was chosen from Division of Yoga, Karnataka University, Dharwad. The subject was isolated into two groups of CG and experimental group. The experimental group prepare specified yogic practices with pranayama & meditation for twelve weeks, in elective days at both morning and night sessions. The control group did pass on any physical exercises and particular preparing programs. The gathered data were factually dissected by utilizing matched't' test method. The outcomes presumed that experimental group who rehearsed yogic exercises with pranayama and meditation had fundamentally improved the physical fitness parts of explosive strength, flexibility and endurance than that of CG group

METHODOLOGY

The methodology adopted in the present study related with selection of subjects, selection of variables, and selection of tests and orientation of the subjects.

Selection of Subjects

The purpose of the study is to find out **"Impact of Combined Aerobic Exerciseand Yogic Practices on Selected Health Related Physical Fitness, Physiological and Psychological Variables of Secondary School Students".**To achieve this purpose 120 Girls Students in the age group ranging from 14 to 16 years studying in Minority Morarji Desai Girls Residential School Arakeri District,Vijayapura, of Karnataka. State will berandomly selected as subjects will be divided into three equal groups such asCombined Group I, Aerobic Exercise Group II, Yogic Practices Group III and Control group IV.

Selection of Variables

The Researcher will go through the available literature and have discussions with various experts and with guide before selecting variables. The availability of technique for the purpose of analysis, feasibility, Reliability of the procedure and the outcome will be take expensively cares of before finalizing the variables. After analyzing the various factors associated with the present study. Criterion health relatedvariablesMuscular Strength & Endurance, Cardio-Respiratory Endurance and Flexibilitywill be selected for the study.Physiological variables Vital Capacity, Blood pressure and resting pulse rate by measuring test Spiro meter, Sphygmomanometer and radial Pulse rate it will be used for pre-test and post-tests.Psychological Variables Anxiety, Stress and Self-concept by measuring standardQuestionnaire

Independent Variables

Aerobic Exercise

- Mambo Cha – Cha – Cha
- Basic Left
- Basic Right
- L – Step
- Grapevine
- I –Step
- V- Step
- Y – Step

- T- Step
- A - Step

Yoga practices

Sitting Asanas

- Padmasan
- Vajrasan
- Vakrasana
- Paschimottanasana
- Shimhasana

Standing Asanas

- Tadasana
- Vrikshasana
- Virabhadrasana
- Trikoasana
- Garudasana

Supine Asanas

- Shavasana
- Pawanamuktasana
- Naukasana
- Halasana
- Sarvangasana
- Chakrasana

ProlineAsanas

- Makarasana
- Bhujanagasana
- Dhanurasana
- Shalabhasana.

Dependent Variables

Physical Fitness Variables

- Cardio-Respiratory Endurance
- Muscular Strength &Endurance
- Flexibility

Physiological Variables

- Vital capacity
- Blood Pressure
- Resting pulse rate

Psychological Variables

- Anxiety
- Stress
- Self-concept

Selection of the tests

The selection of tests and the criterion Variables are presented in the Following tables.

Health Related Fitness

S.No	Variables	Test	Unit of Measure
01	Cardio-Respiratory Endurance	9 Minutes Run/Walk	Meters
02	Muscular Strength & Endurance	Bend Knee Sit Ups	Number
03	Flexibility	Sit and Reach	Centimeter

Physiological Variables

S.No	Variables	Test	Unit of Measure
01	Vital capacity	Spiro meter	Liters
02	Blood Pressure	Sphygmomanometer	mm/Hg
03	Resting pulse rate	Radial Artery pulse count Method	Number

Psychological Variables

S.No	Variables	Test	Unit of Measure
01	Anxiety	Questionnaire developed by Dr.Harish Sharma and Dr. Rajeev Lochan Bharadwaj	As per Questionnaire
02	Stress	Questionnaire developed byDr.PallaviBhatnagar	As per Questionnaire
03	Self-concept	Questionnaire developed byPratibhaDeo	As per Questionnaire

Orientation of the subjects

The investigator would explain the purpose of the study and the importance of the training programme to the subjects in order to get their co-operation as well as to secure reliable data. A six days may be spent for teach various Combined Aerobic Exercise and Yogic Practices involved in the training prior to the commencement of the training programme.

Collection of the Data

The data will be gathered by conducting Pre and Post test by Muscular Strength & Endurance (9 Minutes Run/Walk), Cardio-Respiratory Endurance (Bend Knee Sit Ups) and Flexibility (Sit and Reach),Vital capacity(Spiro meter), Blood Pressure (Sphygmomanometer) and Resting Pulse rate(Radial Pulse rate), by using questionnaire for Anxiety,Stress and Self-concept will be taken.

Statistical techniques

In pursuance of the objectives of the study as well as to test the Research hypothesis. Mean, standard deviationand ANOVA will be used to find out the differences between groups to make adjustments for difference in the initial means and test the adjusted post test means for significant differences.

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Signature of

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Research Guide

Place:

Date:

Remarks of the Guide:

Recommendation of the Department Council:

Recommendation of Board Studies: Nil

Recommendation and Signature of the Research Advisory Committee:

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